



Water-Data Report 2008

**01367800 PAPAKATING CREEK AT PELLETTOWN, NJ**

HUDSON RIVER BASIN

LOCATION.--Lat 41°09'46", long 74°40'31" referenced to North American Datum of 1983, Frankford Township, Sussex County, NJ, Hydrologic Unit 02020007, on upstream left wingwall of bridge on County Route 565 (Pellettown Road) in Pellettown, 1.5 mi southeast of Wykertown, 3.9 mi northeast of Branchville, and 4.5 mi upstream of West Branch Papakating Creek.

DRAINAGE AREA.--15.8 mi<sup>2</sup>.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1959-64, 1999-2003. October 2003 to current year.

GAGE.--Water-stage and rain recorder and crest-stage gage. Datum of gage is 414.28 ft above NAVD of 1988 (levels from New Jersey Geological Survey benchmark).

REMARKS.--Records fair. Several measurements of water temperature were made during the year. Satellite gage-height and air-temperature telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct 27	1700	303	5.08
Dec 24	0030	269	4.86
Feb 13	1715	*753	*7.09
Feb 18	1630	728	7.00
Mar 5	0915	671	6.79
Mar 8	1845	701	6.90
Mar 19	2245	208	4.46

## Water-Data Report 2008

## 01367800 PAPAKATING CREEK AT PELLETTOWN, NJ—Continued

**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**  
**DAILY MEAN VALUES**  
[*e*, estimated]

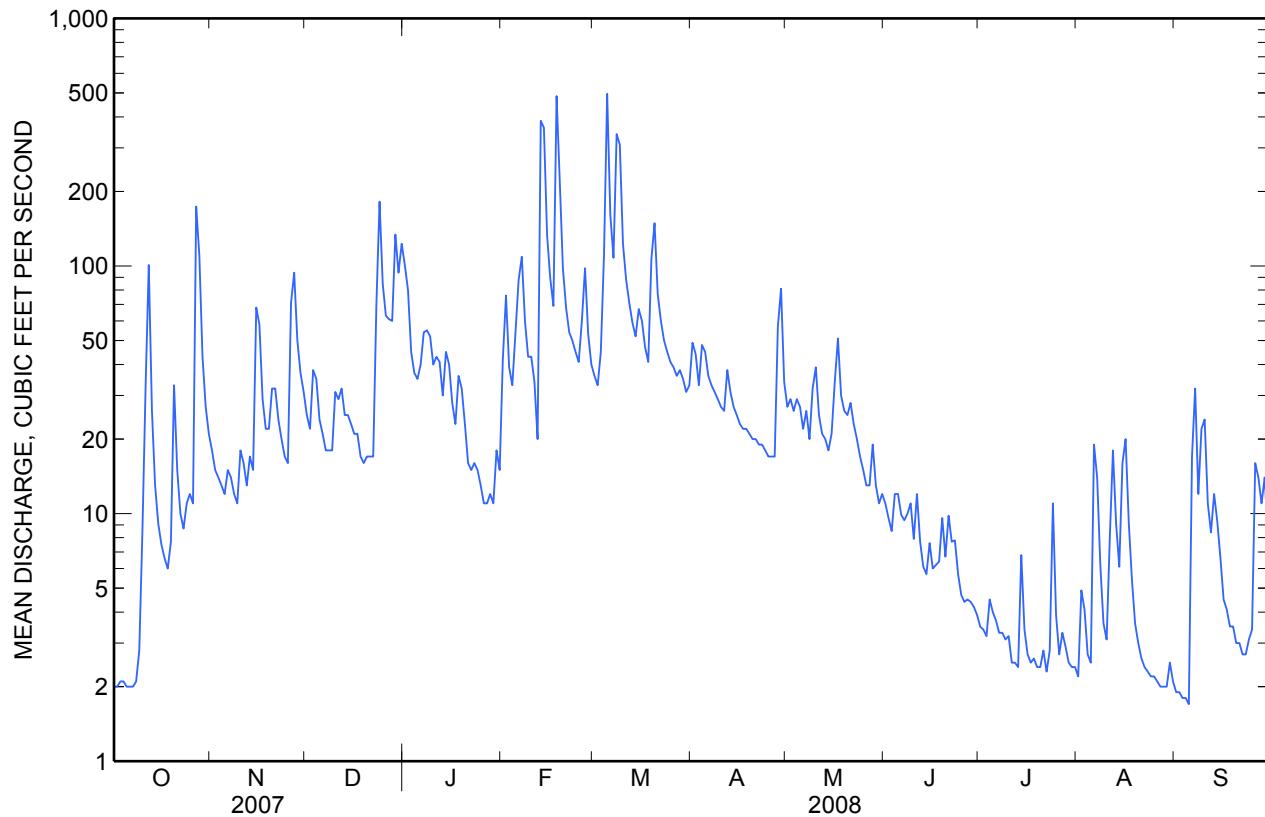
<b>Day</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>
<b>1</b>	2.0	18	25	101	42	36	49	27	11	3.5	2.2	1.9
<b>2</b>	2.0	15	22	e80	76	33	44	29	9.6	3.4	4.9	1.9
<b>3</b>	2.1	14	38	e45	39	45	33	26	8.5	3.2	4.1	1.8
<b>4</b>	2.1	13	35	37	33	111	48	29	12	4.5	2.7	1.8
<b>5</b>	2.0	12	e24	35	54	496	45	27	12	4.0	2.5	1.7
<b>6</b>	2.0	15	e21	40	88	161	36	22	9.9	3.7	19	17
<b>7</b>	2.0	14	e18	54	109	108	33	26	9.4	3.3	14	32
<b>8</b>	2.1	12	18	55	60	341	31	20	10	3.3	6.2	12
<b>9</b>	2.8	11	18	52	43	309	29	32	11	3.1	3.6	22
<b>10</b>	8.6	18	31	40	43	123	27	39	7.9	3.2	3.1	24
<b>11</b>	33	16	29	43	e34	88	26	25	12	2.5	8.0	11
<b>12</b>	101	13	32	41	e20	71	38	21	7.7	2.5	18	8.4
<b>13</b>	26	17	25	30	386	59	31	20	6.1	2.4	9.1	12
<b>14</b>	13	15	25	45	362	52	27	18	5.7	6.8	6.1	9.3
<b>15</b>	9.1	68	23	40	133	67	25	21	7.6	3.4	16	6.6
<b>16</b>	7.5	58	21	28	e89	60	23	34	6.0	2.7	20	4.5
<b>17</b>	6.6	29	21	23	e69	47	22	51	6.2	2.5	9.2	4.1
<b>18</b>	6.0	22	17	36	486	41	22	30	6.4	2.6	5.4	3.5
<b>19</b>	7.7	22	16	32	222	107	21	26	9.6	2.4	3.6	3.5
<b>20</b>	33	32	17	e23	98	149	20	25	6.7	2.4	3.0	3.0
<b>21</b>	15	32	17	e16	68	77	20	28	9.8	2.8	2.6	3.0
<b>22</b>	10	24	17	15	54	60	19	23	7.7	2.3	2.4	2.7
<b>23</b>	8.7	20	70	16	50	50	19	20	7.8	2.8	2.3	2.7
<b>24</b>	11	17	182	e15	45	45	18	17	5.7	11	2.2	3.1
<b>25</b>	12	16	85	e13	41	41	17	15	4.7	3.9	2.2	3.4
<b>26</b>	11	71	63	e11	60	39	17	13	4.4	2.7	2.1	16
<b>27</b>	174	94	61	11	98	36	17	13	4.5	3.3	2.0	14
<b>28</b>	110	50	60	12	e53	38	57	19	4.4	2.9	2.0	11
<b>29</b>	43	37	134	11	e40	35	81	13	4.2	2.5	2.0	14
<b>30</b>	27	31	94	18	---	31	34	11	3.9	2.4	2.5	8.1
<b>31</b>	21	---	123	15	---	33	---	12	---	2.4	2.1	---
<b>Total</b>	713.3	826	1,382	1,033	2,995	2,989	929	732	232.4	104.4	185.1	260.0
<b>Mean</b>	23.0	27.5	44.6	33.3	103	96.4	31.0	23.6	7.75	3.37	5.97	8.67
<b>Max</b>	174	94	182	101	486	496	81	51	12	11	20	32
<b>Min</b>	2.0	11	16	11	20	31	17	11	3.9	2.3	2.0	1.7
<b>Cfsm</b>	1.46	1.74	2.82	2.11	6.54	6.10	1.96	1.49	0.49	0.21	0.38	0.55
<b>In.</b>	1.68	1.94	3.25	2.43	7.05	7.04	2.19	1.72	0.55	0.25	0.44	0.61

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2008, BY WATER YEAR (WY)**

	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>
<b>Mean</b>	43.5	38.2	47.4	47.4	42.7	52.3	50.4	22.9	20.6	10.8	12.3	21.0
<b>Max</b>	97.5	55.0	76.2	77.0	103	96.4	90.7	42.2	66.3	25.7	23.1	72.0
(WY) (2006)	(2007)	(2004)	(2006)	(2008)	(2008)	(2007)	(2007)	(2004)	(2006)	(2006)	(2004)	(2004)
<b>Min</b>	23.0	24.1	28.6	28.8	12.0	15.7	27.5	12.8	5.65	3.37	1.95	1.44
(WY) (2008)	(2005)	(2007)	(2004)	(2007)	(2006)	(2006)	(2006)	(2007)	(2005)	(2008)	(2005)	(2005)

**SUMMARY STATISTICS**

	<b>Calendar Year 2007</b>	<b>Water Year 2008</b>	<b>Water Years 2003 - 2008</b>
<b>Annual total</b>	10,373.2	12,381.2	
<b>Annual mean</b>	28.4	33.8	34.1
<b>Highest annual mean</b>			40.3
<b>Lowest annual mean</b>			27.6
<b>Highest daily mean</b>	746	Apr 16	746
<b>Lowest daily mean</b>	1.9	Sep 27	0.77
<b>Annual seven-day minimum</b>	2.0	Sep 24	0.87
<b>Maximum peak flow</b>		753	1,210
<b>Maximum peak stage</b>		Feb 13	Apr 16, 2007
<b>Instantaneous low flow</b>		7.09	8.50
<b>Annual runoff (cfsm)</b>	1.80	2.14	2.16
<b>Annual runoff (inches)</b>	24.42	29.15	29.30
<b>10 percent exceeds</b>	60	70	66
<b>50 percent exceeds</b>	14	18	21
<b>90 percent exceeds</b>	3.5	2.6	3.6



**01367800 PAPAKATING CREEK AT PELLETTOWN, NJ—Continued****WATER-QUALITY RECORDS**

PERIOD OF RECORD.--Water years 1959-63, 1999 to current year.

REMARKS.--Cooperative Network Site Descriptor: Agricultural Land Use Indicator, New Jersey Department of Environmental Protection (NJDEP) Watershed Management Area 2.

COOPERATION.--Physical measurements and samples for laboratory analyses were provided by personnel of the NJ Department of Environmental Protection. Determinations of dissolved ammonia, dissolved orthophosphate, suspended residue, ammonia-plus-organic nitrogen in bed sediment, and phosphorus in bed sediment were performed by the NJ Department of Health and Senior Services, Environmental and Chemical Laboratory.

**WATER-QUALITY DATA  
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**

Part 1 of 3

[Remark codes: &lt;, less than; E, estimated; M, presence verified but not quantified.]

Date	Time	Turbdty white light, det ang 90+/-30 dis- charge, corrctd	UV absorb- ance, 254 nm, wat flt units	UV absorb- ance, 280 nm, wat flt units	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	pH, water, unfltrd field, std units (00400)	Specif- ic conduc- tance, wat unf μS/cm (00095)	Temper- ature, air, deg C (00020)	Temper- ature, water, deg C (00010)	Hard- ness, water, mg/L as CaCO3 (00900)	
Dec 12...	1100	34	2.4	.126	.096	750	16.2	122	8.2	278	12.0	3.6	82
Mar 04...	1030	57	4.1	.086	.066	748	13.5	101	7.6	263	13.5	3.0	69
Jun 11...	0815	14	9.7	.198	.153	754	6.0	67	7.8	343	28.5	20.6	120
Aug 04...	0930	2.7	5.3	.116	.089	752	6.0	66	7.9	417	23.5	19.7	150

**WATER-QUALITY DATA  
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**

Part 2 of 3

[Remark codes: &lt;, less than; E, estimated; M, presence verified but not quantified.]

Date	Calcium water, filtrd, mg/L (00915)	Magnes- ium, water, filtrd, mg/L (00925)	Potas- sium, water, filtrd, mg/L (00935)	Sodium, water, filtrd, mg/L (00930)	ANC, wat unf fixed end pt, mg/L as CaCO3 (90410)	Chlor- ide, water, lab, mg/L (00940)	Fluor- ide, water, filtrd, mg/L (00950)	Silica, water, filtrd, mg/L as SiO2 (00955)	Sulfate water, filtrd, mg/L (00945)	Residue water, filtrd, sum of consti- tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total non- filter- able, mg/L (00530)	Ammonia + org-N, water, filtrd, mg/L as N (00623)
Dec 12...	26.3	3.96	1.57	21.0	55	34.9	E.06	7.8	20.1	E151	167	1	.21
Mar 04...	22.2	3.37	1.25	20.5	45	37.9	<.12	6.2	16.7	138	140	3	.27
Jun 11...	39.2	5.17	1.66	19.9	100	33.6	<.12	9.1	16.7	188	213	12	.44
Aug 04...	50.3	6.66	2.14	21.0	124	39.2	E.08	9.1	22.0	E227	254	3	.37

## 01367800 PAPAKATING CREEK AT PELLETTOWN, NJ—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**

Part 3 of 3

[Remark codes: &lt;, less than; E, estimated; M, presence verified but not quantified.]

Date	Ammonia water, filtrd, mg/L as N (00608)	Nitrate + nitrite water, mg/L as N (00631)	Particulate nitrogen, susp, water, mg/L (49570)	Total nitrogen, water, filtrd, mg/L (00602)	Total nitrogen, water, unfltrd mg/L (00600)	Ortho-phosphate, water, filtrd, mg/L as P (00671)	Phosphorus, water, filtrd, mg/L as P (00666)	Phosphorus, water, unfltrd mg/L as P (00665)	Total carbon, suspnd sedimnt total, mg/L (00694)	Inorganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, filtrd, mg/L (00681)	Boron, water, filtrd, µg/L (01020)
Dec 12...	.014	.48	<.04	.69	--	.010	.015	.009	.2	M	.2	3.5	9.9
Mar 04...	.012	.61	E.03	.88	E.91	<.010	.013	.022	.3	<.04	.3	2.5	8.6
Jun 11...	.050	.62	.10	1.1	1.2	.024	.037	.073	.7	M	.7	5.4	16
Aug 04...	.035	.55	.07	.92	1.0	.020	.032	.053	.4	<.04	.4	3.7	17

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**

Part 1 of 4

[Remark codes: &lt;, less than; E, estimated.]

Date	Time	pH bed sedimnt std units (70310)	Ammonia + org-N, bed sed total, mg/kg as N (00626)	Phos-phorus, bed sedimnt total, mg/kg as P (00668)	Total carbon, bed sedimnt total, g/kg (00693)	Inor-ganic carbon, bed sedimnt total, g/kg (00686)	Arsenic bed sedimnt recover -able, ug/g (64847)	Cadmium bed sedimnt recover -able, ug/g (01028)	Chrom-ium, bed sedimnt recover -able, ug/g (01029)	Cobalt bed sedimnt recover -able, ug/g (01038)	Copper, bed sedimnt recover -able, ug/g (01043)	Iron, bed sedimnt total digest, ug/g (01170)	Lead, bed sedimnt recover -able, ug/g (01052)
Aug 04...	1015	7.30	630	4,400	27	1.3	6.4	.250	20	9.9	17	30,000	35

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**

Part 2 of 4

[Remark codes: &lt;, less than; E, estimated.]

Date	Mangan-ese, bed sedimnt recover -able, ug/g (01053)	Mercury bed sedimnt recover -able, ug/g (71921)	Nickel, bed sedimnt recover -able, ug/g (01068)	Selen-iun, bed sedimnt recover -able, ug/g (64848)	Zinc, bed sedimnt recover -able, ug/g (01093)	1,2-Di-methyl-naphth-alene, bed sed bed sed ug/kg (49403)	1,6-Di-methyl-naphth-alene, bed sed bed sed ug/kg (49404)	1Methyl-9H-fluor-ene, bed sed bed sed ug/kg (49398)	1-Methyl-phenan-threne, bed sed bed sed ug/kg (49410)	1-Methyl-pyrene, bed sed wsv nat ug/kg (49388)	236Tri-methyl-naphth-alene, bed sed bed sed ug/kg (49405)	2,6-Di-methyl-naphth-alene, bed sed ug/kg (49406)	2-Ethylnaphth-alene bed sed ug/kg (49948)
Aug 04...	1,200	.052	20.4	.4	150	<56	E3	<56	E4	E5	E2	E10	<56

## 01367800 PAPAKATING CREEK AT PELLETTOWN, NJ—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**

Part 3 of 4

[Remark codes: &lt;, less than; E, estimated.]

Date	2-Methyl-anthra-cene, bed sed <2 mm, bs ug/kg (49435)	4H-Cyclo-penta-fluor-ene, bed sed <2 mm, wsv nat ug/kg (49411)	9H-Fluor-naphth-ene, bed sed <2 mm, wsv nat ug/kg (49399)	Ace-naphth-ylene, bed sed <2 mm, wsv nat ug/kg (49429)	Ace-naphth-ylene, bed sed <2 mm, wsv nat ug/kg (49428)	Anthra-cene, bed sed <2 mm, wsv nat field, <2 mm ug/kg (49434)	Benzene, [a]-anthra-cene, bed sed <2 mm, wsv nat ug/kg (49436)	Benzene, [a]-pyrene, bed sed <2 mm, wsv nat ug/kg (49389)	Benzene, [b]-fluor-anthene, bed sed <2 mm, wsv nat ug/kg (49458)	Benzene, [b]-peryl-anthene, bed sed <2 mm, wsv nat ug/kg (49408)	Benzene, [g,h]-anthene, bed sed <2 mm, wsv nat ug/kg (49397)	Benzene, [k]-fluor-anthene, bed sed <2 mm, wsv nat ug/kg (49450)	Chrysene, bed sed <2 mm, wsv nat ug/kg (49461)	Dibenzanthracene, bed sed <2 mm, wsv nat ug/kg (49461)
Aug 04...	<56	E5	E3	E1	E9	E10	E32	E37	68	E23	E27	E44	<56	

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**

Part 4 of 4

[Remark codes: &lt;, less than; E, estimated.]

Date	Fluor-anthene, bed sed <2 mm, wsv nat ug/kg (49466)	Indeno-[1,2,3-cd]pyrene, bed sed <2 mm, wsv nat ug/kg (49390)	Iso-phorone, bed sed <2 mm, wsv nat ug/kg (49400)	Naphthalene, bed sed <2 mm, wsv nat field, <2 mm ug/kg (49402)	p-PCBs, bed sed <2 mm, wsv nat sediment ug/kg (49402)	Cresol, bed sed <2 mm, wsv nat ug/kg (39519)	Phenanthrene, bed sed <2 mm, wsv nat ug/kg (49451)	Phenanthrene, bed sed <2 mm, wsv nat ug/kg (49409)	Phenanthrene, bed sed <2 mm, wsv nat ug/kg (49393)	Pyrene, bed sed <2 mm, wsv nat ug/kg (49387)	Sediment, dry svd wsv dia percent ug/kg (80164)	Bed sediment, sve dia percent ug/kg <62.5um (80164)	
Aug 04...	66	E23	<56	E4	<5.00	E10	E21	<56	59	18			